

REMARKS

This response is offered in reply to the office action of May 25, 2006.

Applicants acknowledge and appreciate the allowance of claims 6, 8, 9, 12, 15, 19, 21, and 24 in paragraph 4 of the office action.

Applicants have amended claim 26 in a manner believed to place the claim in condition for allowance.

In paragraph 3 of the office action, claims 1-3, 7, 10, 11, 13, 14, 22, 23, and 26 are rejected under 35 USC 103(a) in view of the cited Bertels US Patent 3,202,793 taken with the Wang US Patent 6,373,021.

This rejection is believed to be incorrect. In particular, the cited '793 patent does not disclose the features of independent claims 1, 10, 22, and 26. Instead, Figure 1 of the '793 patent merely discloses welding a rolled section of steel angle bar 9 by fillet welds 13 to partially zinc coated steel strip 10, which is welded by fillets 12 to tube 8. Figures 3 and 4 of the cited '793 patent show a steel plate 16 welded to a steel strip which has the same thickness as the steel plate 16 and which is welded to an aluminum plate 21.

The examiner acknowledges the deficiencies of the '793 patent on page 3, lines 13-14 of the office action. In particular, the '793 patent does not disclose or suggest spot welding a metal sheet to a major side of a bridging patch having an edge welded to a metal tube.

The examiner cites the Wang '021 patent as showing spot welding of a metal sheet to a major side of a bridging patch. However, this is believed to be patently in error since, as pointed out by Applicants' previously, the Wang '021 patent does not disclose the metal sheet 12 welded to an intermediate bridging patch, but instead and in contrast to Applicants' claims, shows the metal sheet 12 welded directly to the side wall 22 of the tube 10.

Thus, the examiner's comments about the Wang '021 patent at page 3, last paragraph, last sentence, and at page 4, last paragraph of the office action are believed to be patently in error and apparently based on a misunderstanding of the Wang '021 patent. The same is true of the examiner's comments at page 5, lines 12-19 regarding the Wang '021 patent.

As mentioned above, the Wang '021 patent shows the metal sheet 12 welded directly to the side wall 22 of the tube 10 without an intermediate bridging patch in a manner contrary to Applicants' claims. The Wang '021 patent does not disclose or suggest a bridging patch having an edge welded to a metal tube and does not show a metal sheet spot welded to a major side of the bridging patch.

Thus, the Wang '021 patent is not believed to make up for the deficiencies of the '793 patent.

In order to advance prosecution of this application, the examiner is invited to explain to Applicants where, in the Wang '021 patent, a bridging patch is disclosed to which a major side of the metal sheet 12 is spot welded.

Independent claims 1, 10, 22, and 26 are believed to distinguish patentably over the cited patents.

Further, the '793 patent and the '021 patent taken alone or together do not disclose or suggest welding a metal bridging patch to a metal tube wherein a welding arc is established between an edge of the bridging patch and the tube and spot welding a metal sheet to a major side of the bridging patch as recited in dependent claim 3 and in independent claim 22. Drawn arc welding is not disclosed or suggested in the patents for welding a bridging patch to a metal tube in fabrication of a sheet-to-tube structure.

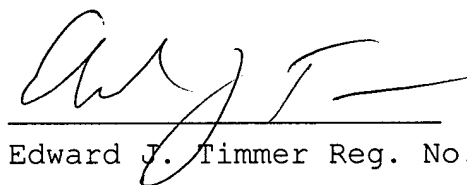
The examiner's comments on page 3, lines 2-3 of the office action appear to Applicants' to constitute a hindsight analysis of Applicants' claims 3 and 22, given the lack of disclosure or suggestion in the patents of drawn arc welding.

Still further, the '793 patent and the '021 patent taken alone or together do not disclose or suggest the features of dependent claims 7, 13, 14, and 23.

Reconsideration of the Section 103 rejection of claims 1-3, 7, 10, 11, 13, 14, 22, 23, and 26 and allowance of these claims is requested.

Allowance of the pending claims is requested.

Respectfully submitted,

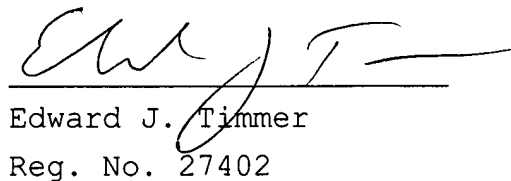


Edward J. Timmer Reg. No. 27402

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Edward J. Timmer
Reg. No. 27402